

## ABSTRACT OF THE DISCLOSURE

A melt-cast explosive which shares comparable explosive properties to those of COMP B explosives and is melt-pourable and castable under conditions comparable to those of COMP B explosives, but experiences less impact, shock, and thermal sensitivity and avoids the issues of toxicity associated with COMP B. A fundamental and well-accepted component of COMP B, i.e., trinitrotoluene (TNT), is replaced with one or more mononitro-substituted or dinitro-substituted melt-cast binders, such as dinitroanisole, which can be melt-cast without presenting the toxicity drawbacks experienced with the use of TNT. The melt-cast binder can also be combined with a processing aid selected from the group consisting of alkynitroanilines and arylnitroanilines. Preferably, the composition also includes coarse oxidizer particles and energetic filler in fine particulate form.